

## CLAIMS

1. A low application temperature hot melt adhesive that is applied at or below 300°F and wherein the bonded adhesive heat stress value and the adhesive application temperature are separated by 110°F or less.
2. The adhesive of claim 1 applied at or below 250°F and wherein the bonded adhesive heat stress value and the adhesive application temperature are separated by 100°F or less.
3. The adhesive of claim 2 applied at or below 200°F and wherein the bonded adhesive heat stress value and the adhesive application temperature are separated by 100°F or less.
4. The adhesive of claim 1 wherein crystallization of the adhesive when analyzed by differential scanning calorimeter from application temperature to room temperature at a cooling rate of 150°C/min yields a time between initial cooling a crystallization of 0.35 minutes or greater.
5. The adhesive of claim 1 that is thermally stable at application temperature for a period of one hundred hours as indicated by a viscosity change within plus/minus ten percent of the original application viscosity.
6. The adhesive of claim 1 further comprising an energy absorbing ingredient.
7. The adhesive of claim 1 further comprising a fragrance.
8. An article of manufacture comprising the adhesive of claim 1.
9. The article of claim 8 wherein crystallization of the adhesive when analyzed by differential scanning calorimeter from application temperature to room temperature at a

cooling rate of 150°C/min yields a time between initial cooling and crystallization of 0.35 minutes or greater and which is thermally stable at application temperature for a period of seventy two hours as indicated by a viscosity change within plus/minus ten percent of the original application viscosity.

10. The article of claim 8 which is a carton, case, tray, bag or book.
11. A method of sealing and/or forming a case, carton, tray, bag or book comprising applying the hot melt adhesive of claim 1 to seal and/or form the case, carton, tray, bag or book.
12. A packaged article contained within a carton, case, tray or bag, wherein the carton, case, tray or bag comprises the adhesive of claim 1.
13. The packaged article of claim 12 which is a packaged food article.
14. A process for bonding a substrate to a similar or dissimilar substrate comprising applying to at least one substrate a molten hot melt adhesive composition of claim 1 and bonding said substrate together.
15. An apparatus for applying the adhesive of claim 1 to a substrate, said apparatus comprising a hot melt delivery and/or application system which operates at a temperature of less than about 225°F.
16. A method of manufacturing the adhesive of claim 1, said method comprising heating adhesive components at a temperature below about 250°F to form a homogenous adhesive blend.
17. The method of claim 16 whereby heating is achieved using low pressure steam at about less than 25psi or hot water.

18. The method of claim 16 utilizing a heated IBC or other transit container as the primary vessel for mixing, storage, distribution, and/or delivery.
19. A method of claim 16 wherein a continuous flow mixing process is used to obtain said homogeneous blend.
20. A method of claim 16 wherein the adhesive components are molten, pre-melted materials.
21. An apparatus for applying hot melt adhesive, said apparatus having a maximum operating temperature of less than about 225°F.